

FEBRUARY / FÉVRIER

ARTICLES

<b>Giancarlo Gioda, Livio Locatelli, and Francesco Gallavresi</b>	A numerical and experimental study of the artificial freezing of sand	1
<b>Adnan A. Basma</b>	Risk-reduction factor for bearing capacity of shallow foundations	12
<b>Jeffrey C. Dick, Abdul Shakoor, and Neil Wells</b>	A geological approach toward developing a mudrock-durability classification system	17
<b>William H. Craig and Suhail K. Sabagh</b>	Stress-level effects in model tests on piles	28
<b>Jian-Hua Yin and James Graham</b>	Equivalent times and one-dimensional elastic viscoplastic modelling of time-dependent stress-strain behaviour of clays	42
<b>V.S. Pillai and P.M. Byrne</b>	Effect of overburden pressure on liquefaction resistance of sand	53
<b>Guy Lefebvre, Denis Leboeuf, Muhsin E. Rahhal, Alain Lacroix, Joseph Warde, and Kenneth H. Stokoe II</b>	Laboratory and field determinations of small-strain shear modulus for a structured Champlain clay	61
<b>R.S. Ferreira and P.K. Robertson</b>	Large-strain undrained pressuremeter interpretation based on loading and unloading data	71
<b>B.M. Lehané and R.J. Jardine</b>	Displacement pile behaviour in glacial clay	79
<b>An-Bin Huang and Max Y. Ma</b>	An analytical study of cone penetration tests in granular material	91

NOTES

<b>Yarlong Wang</b>	The effect of a nonlinear Mohr-Coulomb criterion on borehole stresses and damage-zone estimate	104
<b>Y.V.S.N. Prasad and S. Narasimha Rao</b>	Pullout behaviour of model pile and helical pile anchors subjected to lateral cyclic loading	110
<b>S. Sasitharan, P.K. Robertson, and D.C. Sego</b>	Sample disturbance from shear wave velocity measurements	119
<b>Siew-Ann Tan</b>	Hyperbolic method for settlements in clay with vertical drains	125
<b>D. Negussey and M.S. Islam</b>	Uniqueness of steady state and liquefaction potential	132

DISCUSSIONS

<b>Gopal Achari and R.C. Joshi</b>	A reexamination of the permeability index of clays: Discussion	140
<b>N.S. Pandian, G.L.S. Babu, and T.S. Nagaraj</b>	A reexamination of the permeability index of clays: Reply	141

BOOK REVIEW / CRITIQUE DE LIVRE

<b>I.G. Bruce</b>	Landslides / Glissements de terrain	143
-------------------	-------------------------------------	-----

ERRATUM

<b>R. Kerry Rowe, Chris J. Caers, and Cliff Chan</b>	Evaluation of a compacted till liner test pas constructed over a granular subliner contingency layer	144
--	--	-----

<b>Instructions to authors</b>	v
<b>Recommandations aux auteurs</b>	vii
<b>Research Journals publication policy</b>	x
<b>Revue scientifique politique de publication</b>	xii

APRIL / AVRIL

ARTICLES

<b>C.B. Crawford, H. Jitno, and P.M. Byrne</b>	The influence of lateral spreading on settlements beneath a fill	145
<b>G. Ward Wilson, D.G. Fredlund, and S.L. Barbour</b>	Coupled soil-atmosphere modelling for soil evaporation	151
<b>Nario Yasuda and Norihisa Matsumoto</b>	Comparisons of deformation characteristics of rockfill materials using monotonic and cyclic loading laboratory tests and in situ tests	162
<b>Shad M. Sargand, Glenn A. Hazen, Teruhisa Masada, and John O. Hurd</b>	Long-term field study of a deep-corrugated metal box type culvert	175
<b>B.M. Lehané and R.J. Jardine</b>	Displacement-pile behaviour in a soft marine clay	181

<b>K.Y. Lo, J.Q. Shang, and I.I. Inculet</b>	Electrical strengthening of clays by dielectrophoresis	192
<b>Chang-Yu Ou and Ching-Her Lai</b>	Finite-element analysis of deep excavation in layered sandy and clayey soil deposits	204
<b>J.C. Santamarina and B. Potts</b>	On the imaging of stress in particulate media: an experimental study	215
<b>J.-M. Konrad</b>	Sixteenth Canadian Geotechnical Colloquium: Frost heave in soils: concepts and engineering	223
<b>Yves Robert</b>	A new approach to the analysis of high-strain dynamic pile test data	246
<b>A. Steel, J.I. Clark, and P. Morin</b>	A comparison of pressuremeter test results in sea ice	254
<b>Robin Fell</b>	Landslide risk assessment and acceptable risk	261
<b>Ashraf Ghaly and Adel Hanna</b>	Model investigation of the performance of single anchors and groups of anchors	273
<b>J.-M. Konrad and J.T.C. Seto</b>	Frost heave characteristics of undisturbed sensitive Champlain Sea clay	285

## NOTES

<b>S. Lee Barbour and Ernest K. Yanful</b>	A column study of static nonequilibrium fluid pressures in sand during prolonged drainage	299
<b>V. Silvestri and C. Tabib</b>	A reexamination of the strain field around a simple pile	303
<b>Fanyu Zhu and Jack I. Clark</b>	The effect of dynamic loading on lateral stress in sand	308
<b>Hans H. Vaziri and Harold A. Christian</b>	Application of Terzaghi's consolidation theory to nearly saturated soils	311

## BOOK REVIEWS / CRITIQUES DE LIVRES

<b>Paul N. Gaskin</b>	An introduction to the mechanics of soils and foundations through critical state soil mechanics	318
<b>D.M. Cruden</b>	Rock slope stability analysis	319

## JUNE / JUIN

## ARTICLES

<b>S. Sasitharan, P.K. Robertson, D.C. Sego, and N.R. Morgenstern</b>	State-boundary surface for very loose sand and its practical implications	321
<b>Peter H. Morris and David J. Williams</b>	Effective stress vane shear strength correction factor correlations	335
<b>Alex Sy and R.G. (Dick) Campanella</b>	Becker and standard penetration tests (BPT-SPT) correlations with consideration of casing friction	343
<b>R.J. Mitchell</b>	Matrix suction and diffusive transport in centrifuge models	357
<b>Pinnaduwa H.S.W. Kulatilake, Hasan Ucpirti, and Ove Stephansson</b>	Effects of finite-size joints on the deformability of jointed rock at the two-dimensional level	364
<b>B. Elberling, R.V. Nicholson, E.J. Reardon, and P. Tibble</b>	Evaluation of sulphide oxidation rates: a laboratory study comparing oxygen fluxes and rates of oxidation product release	375
<b>S.G. Evans and G.R. Brooks</b>	An earthflow in sensitive Champlain Sea sediments at Lemieux, Ontario, June 20, 1993, and its impact on the South Nation River	384
<b>K.W. Biggar and D.C. Sego</b>	Time-dependent displacement behaviour of model adfreeze and grouted piles in saline frozen soils	395
<b>Brahim Benmokrane, Khaled S. Mouchaorab, and Gérard Ballivy</b>	Laboratory investigation of shaft resistance of rock-socketed piers using the constant normal stiffness direct shear test	407

## NOTES

<b>Ameir Altaee and Bengt H. Fellenius</b>	Physical modeling in sand	420
<b>Y.S. Fang, J.S. Lin, and C.S. Su</b>	An estimation of ground settlement due to shield tunnelling by the Peck-Fujita method	431
<b>S.W. Sloan and A. Assadi</b>	Undrained stability of a plane strain heading	443
<b>W.H. Craig</b>	Size effects in anchor performance	450
<b>Eugene A. Voznesensky, Vladimir Y. Kalachev, Victor T. Trofimov, and Victoria V. Kostomarov</b>	Dynamic instability of seasonally thawing silty soils	454

## DISCUSSIONS

<b>J.H. Shirlaw</b>	Subsidence owing to tunnelling. II. Evaluation of a prediction technique: Discussion	463
<b>R. Kerry Rowe and K.M. Lee</b>	Subsidence owing to tunnelling. II. Evaluation of a prediction technique: Reply	467

## AUGUST / AOÛT

## ARTICLES

<b>L. Li, D.A. Barry, and K.J.L. Stone</b>	Centrifugal modelling of nonsorbing, nonequilibrium solute transport in a locally inhomogeneous soil	471
--	--	-----

<b>Hideo Komine and Nobuhide Ogata</b> Experimental study on swelling characteristics of compacted bentonite	478
<b>K. Sepehr and L.E. Goodrich</b> Frost protection of buried PVC water mains in western Canada	491
<b>T.A. Al, D.W. Blowes, J.L. Jambor, and J.D. Scott</b> The geochemistry of mine-waste pore water affected by the combined disposal of natrojarosite and base-metal sulphide tailings at Kidd Creek, Timmins, Ontario	502
<b>V.V.R.N. Sastry and G.G. Meyerhof</b> Behaviour of flexible piles in layered sands under eccentric and inclined loads	513
<b>D.G. Fredlund and Anqing Xing</b> Equations for the soil-water characteristic curve	521
<b>D.G. Fredlund, Anqing Xing, and Shangyan Huang</b> Predicting the permeability function for unsaturated soils using the soil-water characteristic curve	533
<b>Gerald P. Raymond and Richard J. Bathurst</b> Repeated-load response of aggregates in relation to track quality index	547
<b>R.J. Fannin, Y.P. Vaid, and Y.C. Shi</b> Filtration behaviour of nonwoven geotextiles	555
<b>R.J. Fannin</b> Field observations on the load-strain-time behaviour of geogrid reinforcement	564

## NOTES

<b>Alex J. Zeman</b> Subaqueous capping of very soft contaminated sediments	570
<b>R.J. Mitchell</b> Centrifuge techniques for testing clay liner samples	577
<b>G.G. Meyerhof and A.S. Yalcin</b> Bearing capacity of flexible batter piles under eccentric and inclined loads in layered soil	583
<b>Elmer L. Matyas and J. Carlos Santamarina</b> Negative skin friction and the neutral plane	591
<b>Nabil F. Ismael, Hasan A. Al-Sanad, and Fahad Al-Otaibi</b> Tension tests on bored piles in cemented desert sands	597

## DISCUSSIONS

<b>Étienne J. Windisch</b> Application de la méthode de Bishop simplifiée aux remblais renforcés par les géosynthétiques : Discussion	604
<b>J. Nuyens</b> Application de la méthode de Bishop simplifiée aux remblais renforcés par les géosynthétiques : Réponse	605

## OCTOBER / OCTOBRE

## ARTICLES

<b>K.Y. Lo and J.Q. Shang</b> Effects of intervening media on dielectrophoretic strengthening of soft clays	607
<b>B. Indraratna, I. Gasson, and R.N. Chowdhury</b> Utilization of compacted coal tailings as a structural fill	614
<b>J.Q. Shang, K.Y. Lo., and R.M. Quigley</b> Quantitative determination of potential distribution in Stern-Gouy double-layer model	624
<b>Yusuke Honjo and Thiraisamy Thavaraj</b> On uncertainty evaluation of contaminant migration through clayey barriers	637
<b>Ameir Altaee and Bengt H. Fellenius</b> Modeling the performance of the Molikpaq	649
<b>Ashraf Ghaly and Adel Hanna</b> Ultimate pullout resistance of single vertical anchors	661
<b>Adel Hanna and Ashraf Ghaly</b> Ultimate pullout resistance of groups of vertical anchors	673
<b>T.F. Zimmie, M.B. Mahmud, and A. De</b> Accelerated physical modelling of radioactive waste migration in soil	683
<b>C. Derek Martin and Brian Stimpson</b> The effect of sample disturbance on laboratory properties of Lac du Bonnet granite	692
<b>Arne Instanes, David C. Sego, and Kofi Addo</b> Construction and characterization of a spray-ice pad, Tuktoyaktuk, Northwest Territories	703
<b>M. Zergoun and Y.P. Vaid</b> Effective stress response of clay to undrained cyclic loading	714
<b>T.D. Pitman, P.K. Robertson, and D.C. Sego</b> Influence of fines on the collapse of loose sands	728
<b>Ali Bouafia</b> Étude expérimentale du chargement latéral cyclique répété des pieux isolés dans le sable en centrifugeuse	740
<b>S.G. Evans, O. Hungr, and E.G. Enegren</b> The Avalanche Lake rock avalanche, Mackenzie Mountains, Northwest Territories, Canada: description, dating, and dynamics	749

## NOTES

<b>Mahbubul A. Khan and Vinod K. Garga</b> A simple design for hydraulic consolidometer and volume gauge	769
<b>Jianhua Yin, James Graham, Jack I. Clark, and Longjun Gao</b> Modelling unanticipated pore-water pressures in soft clays	773
<b>Yarlong Wang, Samuel S. Shen, and Haibing Cheng</b> Evolution of the plastic zone near a microfracture: a numerical simulation and its implications on in situ stress measurement	779

## DISCUSSIONS

<b>Paul W. Mayne and Fred H. Kulhawy</b> The coefficient of earth pressure at rest: Discussion	788
<b>C. Cherubini, C.I. Giasi, and F.M. Guadagno</b> The coefficient of earth pressure at rest: Discussion	790
<b>G. Mesri and T.M. Hayat</b> The coefficient of earth pressure at rest: Reply	791
<b>Oldrich Hungr</b> A general limit equilibrium model for three-dimensional slope stability analysis: Discussion	793
<b>L. Lam and D.G. Fredlund</b> A general limit equilibrium model for three-dimensional slope stability analysis: Reply	795

- J.M.O. Hughes, R.G. Campanella, and R.P. Cunha** A finite element study of the pressuremeter test in sand using a nonlinear elastic model: Discussion 797
- Martin Fahey and John P. Carter** A finite element study of the pressuremeter test in sand using a nonlinear elastic plastic model: Reply 799

## BOOK REVIEW / CRITIQUE DE LIVRE

- G.P. Raymond** Review of granular and geotextile filters 802

## DECEMBER / DÉCEMBRE

## ARTICLES

- B. Rajani and N. Morgenstern** Comparison of predicted and observed responses of pipeline to differential frost heave 803
- Knut H. Andersen, Colin G. Rawlings, Tom A. Lunne, and Trond H. By** Estimation of hydraulic fracture pressure in clay 817
- H. den Adel, M.A. Koenders, and K.J. Bakker** The analysis of relaxed criteria for erosion-control filters 829
- W.-M. Tian, A.J. Silva, G.E. Veyera, and M.H. Sadd** Drained creep of undisturbed cohesive marine sediments 841
- H.G. Poulos** Effect of pile driving on adjacent piles in clay 856
- J. Alencar, N.R. Morgenstern, and D.H. Chan** Analysis of foundation deformations beneath the Syncrude tailings dyke 868
- Vince O'Shaughnessy and Vinod K. Garga** The hydrogeological and contaminant-transport properties of fractured Champlain Sea clay in Eastern Ontario. Part 1. Hydrogeological properties 885
- Vinod K. Garga and Vince O'Shaughnessy** The hydrogeological and contaminant-transport properties of fractured Champlain Sea clay in Eastern Ontario. Part 2. Contaminant transport 902
- Liquefaction assessment and seismic stability of Duncan Dam / L'évaluation de liquéfaction et la stabilité sismique du Barrage Duncan*
- Alan S. Imrie** Overview of the liquefaction assessment and seismic stability of Duncan Dam: Specialty session, 46th Annual Canadian Geotechnical Conference Saskatoon, Saskatchewan, September 27-29, 1993 918
- Tim E. Little, Alan S. Imrie, and John F. Psutka** Geologic and seismic setting pertinent to dam safety review of Duncan Dam 919
- Howard D. Plewes, V. Sitham Pillai, Michael R. Morgan, and Brian L. Kilpatrick** In situ sampling, density measurements, and testing of foundation soils at Duncan Dam 927
- D.C. Sego, P.K. Robertson, S. Sasitharan, B.L. Kilpatrick, and V.S. Pillai** Ground freezing and sampling of foundation soils at Duncan Dam 939
- V.S. Pillai and R.A. Stewart** Evaluation of liquefaction potential of foundation soils at Duncan Dam 951
- V.S. Pillai and F.M. Salgado** Post-liquefaction stability and deformation analysis of Duncan Dam 967
- P.M. Byrne, A.S. Imrie, and N.R. Morgenstern** Results and implications of seismic performance studies for Duncan Dam 979

## NOTES

- Z.Q. Yue, A.P.S. Selvadurai, and K.T. Law** Excess pore pressure in a poroelastic seabed saturated with a compressible fluid 989
- Luis E. Vallejo** Fractal analysis of the slake durability test 1003
- Peter Skopek, N.R. Morgenstern, P.K. Robertson, and D.C. Sego** Collapse of dry sand 1008
- Azm S. Al-Homoud, Ahmad B. Tal, and Abdallah I. Husein (Malkawi)** Instability and stabilization of an embankment on the Irbid-Amman Highway in Jordan 1015

## DISCUSSIONS

- J. Chu** Collapse behavior of sand: Discussion 1022
- S. Sasitharan, P.K. Robertson, D.C. Sego, and N.R. Morgenstern** Collapse behavior of sand: Reply 1022
- Dana N. Humphrey and Robert D. Holtz** Application de la méthode de Bishop simplifiée aux remblais renforcés par les géosynthétiques: Discussion 1023

## ERRATUM

- D.G. Fredlund and Anqing Xing** Erratum: Equations for the soil-water characteristic curve 1026

## BOOK REVIEWS / CRITIQUES DE LIVRES

- Note of appreciation / Note de reconnaissance** i
- Author index for Volume 30 / Index des auteurs pour volume 30** AI-1
- Subject index for Volume 30 / Index des matières pour volume 30** SI-1
- Contents for Volume 30 / Sommaire pour volume 30** C-1

